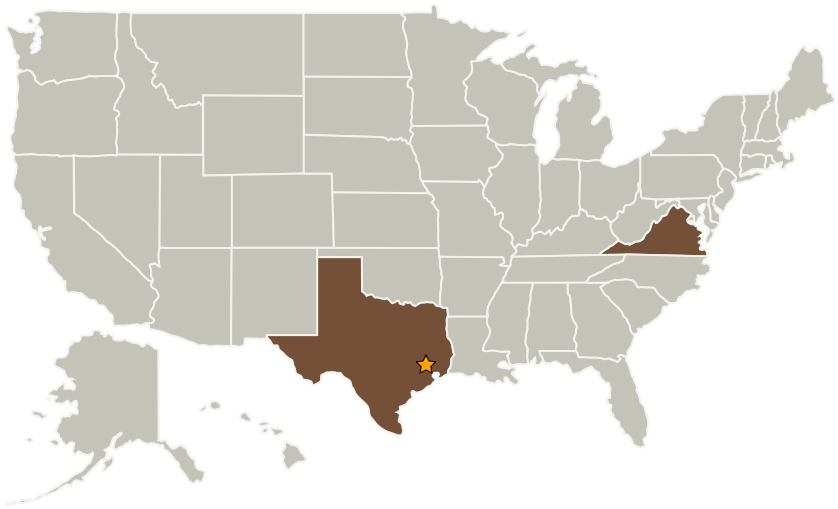
Nanotube Reinforced Multifunctional Materials for Radiation Shielding, Phase I

Completed Technology Project (2006 - 2006)

Project Introduction

NASA's programs to send manned and unmanned missions to Moon, Mars and the planets beyond will require structural materials that can protect the crew and the spacecraft from Galactic Cosmic Rays (GCR), Solar Energy Particles (SEP) and micrometeroid impact. In this Phase I effort, MMI proposes to reinforce high hydrogen content epoxies with nanotubes to obtain high performance composites with 20-25% higher primary load-bearing properties

Primary U.S. Work Locations and Key Partners



Organizations Performing Work	Role	Type	Location
★Johnson Space Center(JSC)	Lead Organization	NASA Center	Houston, Texas
Materials Modification, Inc.	Supporting Organization	Industry Small Disadvantaged Business (SDB)	Fairfax, Virginia

Primary U.S. Work Locations	
Texas	Virginia

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Organizational Responsibility

Responsible Mission Directorate:

Space Technology Mission Directorate (STMD)

Lead Center / Facility:

Johnson Space Center (JSC)

Responsible Program:

Small Business Innovation Research/Small Business Tech Transfer

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Project Management

Program Director:

Jason L Kessler

Program Manager:

Carlos Torrez

Technology Areas

Primary:

- TX14 Thermal Management Systems
  - TX14.3 Thermal Protection Components and Systems
    - TX14.3.1 Thermal Protection Materials